100 NEW YORK CITY DEPARTMENT OF HEALTH

# Highlights of the First 100 Years

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"WHY— I believe I have got smallpox, for I begin to itch all over," cried a New York State legislator as he listened to Dr. Stephen S. Smith explain the sanitary requirements of the Citizen's Association's metropolitan health bill. The date was February 13, 1865, and Smith described how wholesale clothing dealers had goods manufactured in tenement houses. City inspectors often found the clothing thrown over the beds of children with scarlet fever, measles, or smallpox—a condition which helped make the city vulnerable to epidemics. (*1*)

He recalled that in 1859 a group of public-spirited citizens organized a society for sanitary reform, but a health bill introduced annually into the legislature automatically met defeat. The proponents of sanitary reform finally decided to seek legislation through the Citizen's Association, a group of prominent citizens formed in the early 1860's under the presidency of Peter Cooper, whose object was reforming all phases of the municipal government.

Dorman B. Eaton, chairman of the association's council of law, prepared a bill in which a reorganized board of health having extraordinary powers would not be subordinated to any other branch of the civil service, including the courts. The board would make and execute its own laws and sit in judgment on its own acts. To demonstrate the need for the health bill, the association organized a citywide inspection of buildings by young dispensary physicians during the summer of 1864. Smith told the legislative committee that in every city ward acute and destructive diseases prevailed at all seasons among tenement dwellers, generally with a high fatality rate. Disease was everywhere: typhus, measles, diarrhea, dysentery, cholera-infantum, scarlet fever, diphtheria, phthisis, and smallpox.

Furthermore, he contended, New York was inoculating the nation. Visitors contracted disease in unclean hotels and eating places and took it home to contaminate their towns. Young men in the Army passed disease on to their comrades, infecting whole regiments with smallpox through clothing manufactured in the homes of the city's poor.

Despite Smith's vivid portrayal of unsanitary conditions, the bill was defeated. But an aroused public did not return to office the next year 17 members of the legislature voting against the bill. In 1866 cholera reappeared in Europe, and fear of a new epidemic seized the city. As a result, the Metropolitan Health Law, by which the New York City Department of Health dates its existence, was among the first measures passed by the legislature of 1866 (*1*).

To understand the cause of the filthy conditions of disease of 1865, the organization of the earlier health authority must be considered. In 1796 the New York State Legislature appointed a health office commission of seven men to administer quarantine regulations. In 1799

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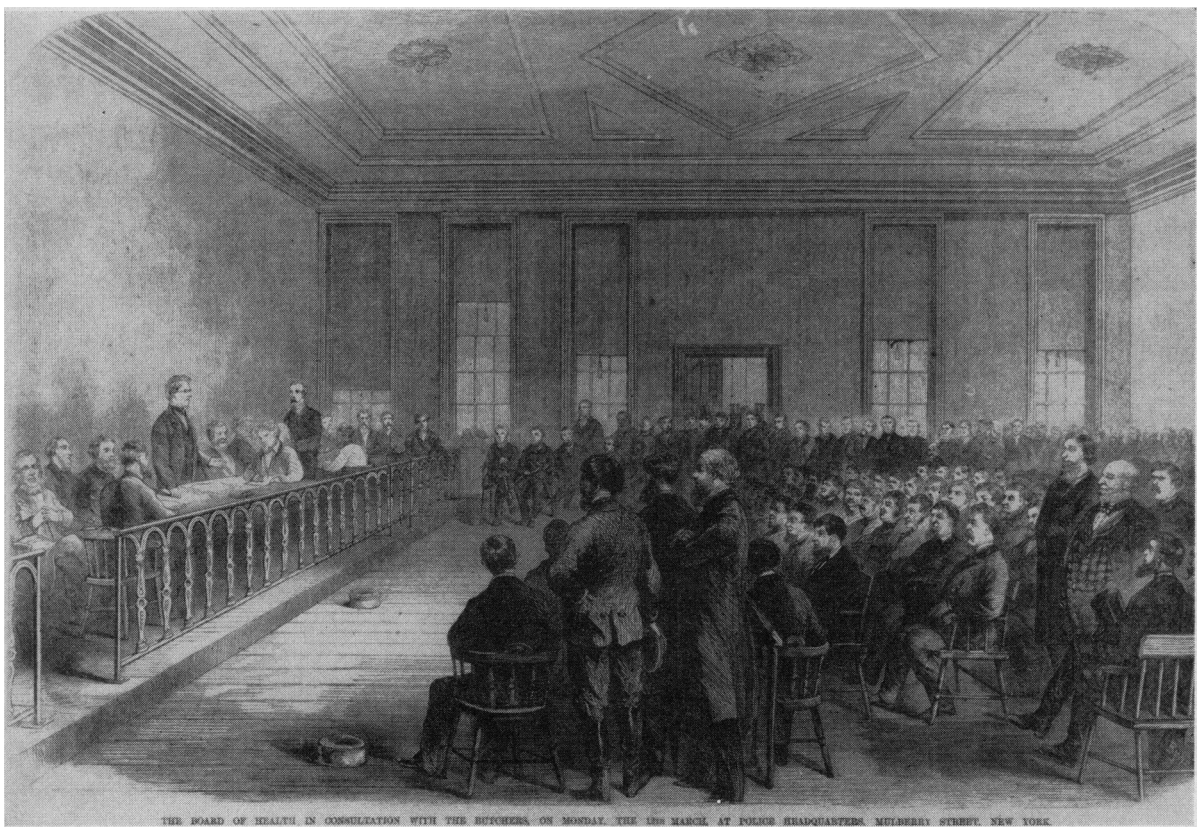
*All material for this report, except the references, has been taken from histories submitted by the bureaus of the department and from the annual and biennial reports of the department.*

membership was reduced to three: the health officer of the port, the resident physician of the hospital on Staten Island, and the health commissioner (the assistant resident physician). In 1804 the legislature empowered the common council to make sanitary ordinances. As a result the council appointed the first city inspector, Dr. John Pintard.

In 1805 the legislature transferred exclusive control over sanitary matters to the council and authorized it to form a board of health to consist of the three State-appointed health commissioners and such others as the council thought proper. In 1849 the city inspector was made an elective official and given "cognizance" of all matters relating to public health; in 1850 he was empowered to appoint his subordinates, the health wardens. Further reorganization in 1850 provided that the mayor and council, when acting on matters of public health, would constitute the board of health. The presidents of the boards of aldermen and assistant aldermen, the health officer of the port, the resident physician, the assistant resident physician, and the city inspector became commissioners of health. Thus the city inspector had little power. The mayor, the councilmen, the aldermen, and the State legislature shared power and responsibility, which led to confusion, conflict, and political maneuvering. The city inspector bore the brunt of criticism from the citizens' committee and became the official whipping boy of the reform movement.

### Board of Health Established

The new board of health came into being on March 5, 1866, when the Governor appointed four commissioners, including three physicians, a health officer of the port, and four police commissioners ex officio. The board established a bureau of records and statistics, appointed Dr.

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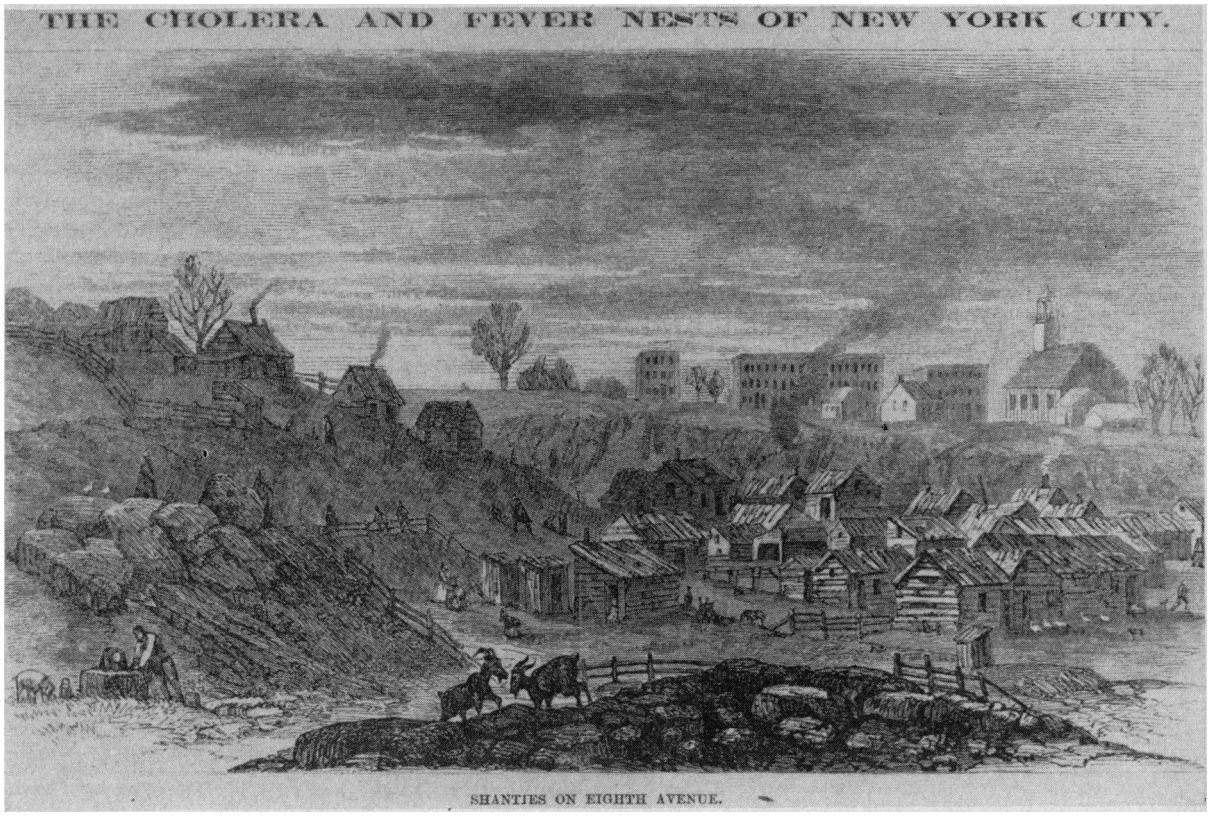
**The board of health in consultation with the butchers of New York at police headquarters, March 1866**

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**Cholera, smallpox, and typhus flourished in the Eighth Avenue shanties shown in this 1866 woodcut**

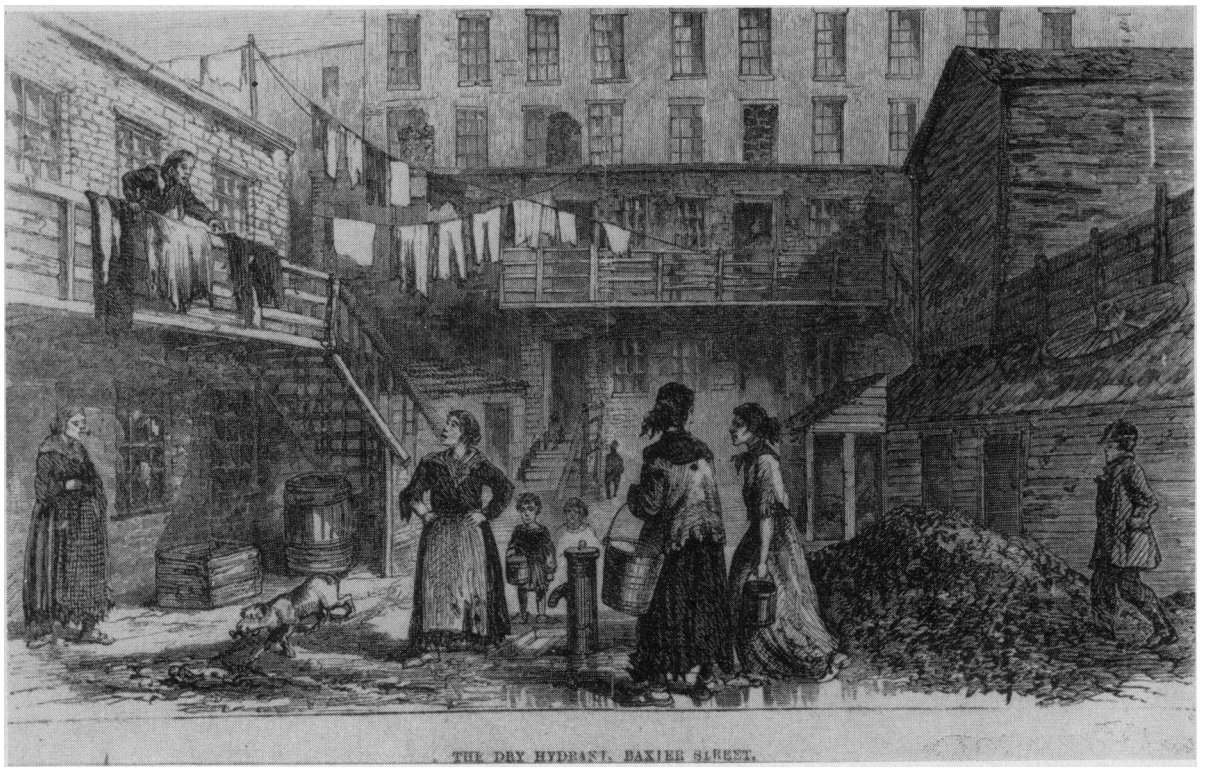
Elisha Harris registrar of records, and established an office of sanitary superintendence. Dr. E. B. Dalton was elected sanitary superintendent.

When the first case of cholera appeared in the city in 1866, patients were immediately isolated and their homes and surroundings thoroughly cleansed and disinfected. A depot and a laboratory for disinfectants were established, and a special disinfecting corps was organized. The antiseptic work was done so thoroughly that no two cases appeared in the same locality, and the new health authority was able to prevent an epidemic.

The board then attacked dirt and disease on the basis of Harris' rules for using disinfectants. Slaughterhouses and bone, offal, and fat-boiling establishments were ordered closed or cleaned. Cellar apartments in tenements were ordered drained, renovated, or vacated. Privies, cesspools, and sinks were cleaned and sewer connections provided. Yards and alleys were cleaned and many were paved. Swill milk establishments were abolished. The board sought to free the streets of garbage and dead animals.

During its first 8 months the board issued 5,000 warnings and 23,000 orders to abate nuisances. A "sanitary company" of the metropolitan police department inspected food establishments and markets since the board believed that "to regulate and control the quality and supply of meat, fish and vegetables is the duty of health officers of all large cities."

In 1869 Harris founded a chemical laboratory where the board's chemist, Dr. Charles F. Chandler, analyzed samples of the city's water supply. He found that city well water was contaminated by privy soakage, which caused outbreaks of typhoid fever. Chemical analyses of cosmetics revealed that many contained injurious amounts of lead. In studying samples of kerosene used in lamps, Chandler found that nearly all had been adulterated with naphtha

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**In the 1860's the board of health fought to rid the streets of filth and garbage**

and were highly explosive. He detected a 25 percent dilution of the milk sold in the city.

*Groundwork for vital statistics.* Each case of infectious disease reported by physicians was investigated immediately. Forms to report births and deaths were developed, and Farr's nomenclature and classification of diseases, approved by the International Statistical Congress in 1864, was adopted.

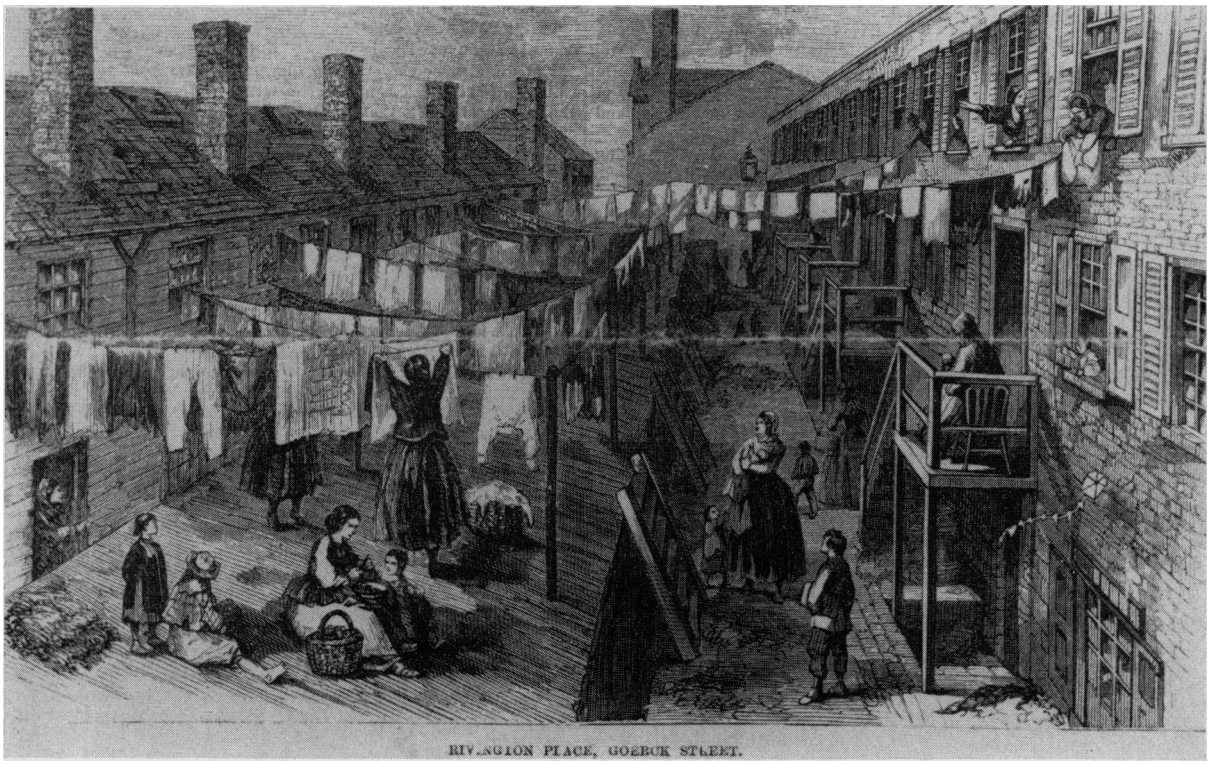
In 1870 the registrar of records, Dr. Charles P. Russell, initiated weekly statistical reports that continue today. Registering physicians were required to produce diplomas "to distinguish the regular graduate from the quack." Defective death certificates were returned to physicians, and failure to complete records satisfactorily led to referral of the cases to the coroner for investigation.

Birth, stillbirth, and marriage certificates were closely examined, and the imposition of successively greater fines for repeated neglect to file birth records was recommended. Success in reporting stillbirths was ascribed to the requirement of burial permits, but failure to report stillbirths of early uterogestation was attributed to surreptitious disposal of small fetuses. By 1874 the bureau of vital statistics was concerned about the high infant mortality, particularly in tenements. Extensive statistical tables stressing the deaths of children under 5 years appeared in the annual report for that year.

*Communicable disease and environmental health.* Tuberculosis accounted for one-sixth to one-fifth of the deaths in the city and was considered a disease of minority groups and the underprivileged. Unsanitary living conditions and poor food were believed to be the causes of tuberculosis.

A high fatality rate from a smallpox epidemic in the winter of 1874–75 prompted legislation that transferred the smallpox hospital from the commissioners of charities and corrections to the health department. A special corps of vaccinators was organized, and a laboratory for the preparation of vaccine virus was established.

Educational activities were started to prevent the spread of contagious diseases. Sani-

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**In the 1850's, more than half a million persons lived in tenements such as these on Rivington Place in New York City**

tary inspectors investigating reported cases of infectious diseases and tenement-house nuisances instructed the inhabitants on the necessity of cleanliness, disinfection, and isolating the sick person from others in the family.

Harris, always concerned with the high infant mortality, promoted educational projects in infant care. With aid from the 1879 Tenement House Fund, special corps of physicians visited tenement houses, prescribed for the sick, and distributed the department's leaflet on infant care.

Two prime concerns of the department in the late 1870's and 1880's were contagious disease and environmental sanitation. It was believed that an unsanitary environment engendered communicable disease. Keeping the streets free of garbage, controlling noxious trades including offensive slaughterhouses, removing manure dumps from the heart of the city, and investigating filthy, overcrowded living conditions and defective plumbing and sewerage were of particular interest. In 1881 a law was passed requiring the department to review and approve plumbing and drainage specifications in all new buildings.

In 1886, an inspector of schools and institutions for children was appointed to routinely inspect schools and asylums. Civic improvement groups—the Association for Improving the Condition of the Poor and the State Charities Aid Association—reported on prevailing evils in tenement houses: overcrowding, poor ventilation, inadequate water supply, absence of decent privies, and so on. As a result the sanitary police force was increased, and in 1887 a law required the department to inspect each tenement house twice a year.

### Golden Age of Bacteriology

Dr. Hermann M. Biggs, consulting pathologist to the department, reported to the board in 1889 confirmation of Koch's classic findings that tuberculosis was a communicable disease caused by a germ, was not hereditary, and was

transmitted by the sputum and other discharges of patients and through meat and milk of diseased cattle (*2*). The department immediately took steps to educate the public in preventive measures and to step up its inspection of the meat and milk supply of the city. A tuberculosis registry was established, and medical inspectors began visiting homes of tubercular patients to teach hygienic methods. A newly established laboratory offered free bacteriological examination of sputum, and special hospital facilities were set up to care for tubercular patients. Tuberculin testing of cattle to prevent infected milk and meat became accepted procedure. By 1897 the reporting of tuberculosis cases by private physicians and institutions was compulsory.

For many years Biggs urged the creation of a departmental diagnostic laboratory, but funds were never provided. In the late summer of 1892 an outbreak of Asiatic cholera occurred in Hamburg, Germany, killing 8,200 persons. When newspapers reported that five steamships from Hamburg with cholera on board were quarantined in New York's harbor, members of the New York City Board of Estimate voted funds to establish a laboratory for the bacteriological diagnosis of disease. The board set up an emergency laboratory for the diagnosis of suspected cases of cholera. Biggs was put in charge and given the title of chief of the division of pathology, bacteriology, and disinfection. Similar emergency laboratories were set up in Hamburg, Bremen, Berlin, and London and disbanded when the emergency was passed, but the city's laboratory expanded to become a major service and the world's first municipal diagnostic bacteriology laboratory.

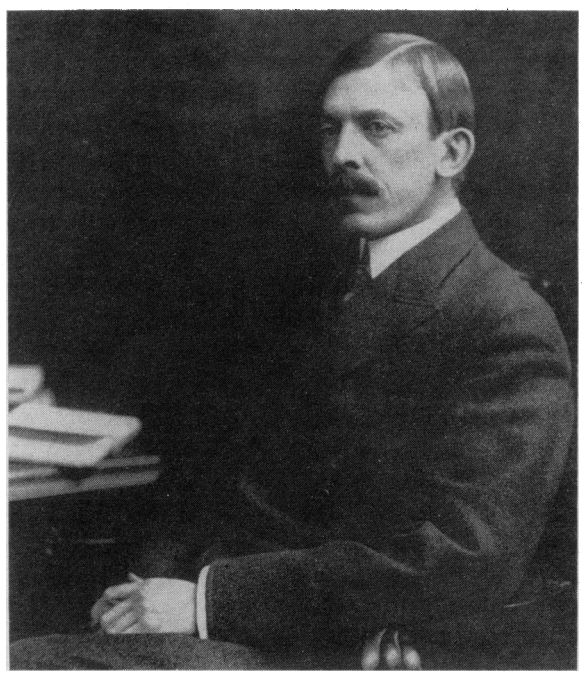
In April 1893 Biggs persuaded Dr. William Hallock Park, one of the few physicians in the city with a practical knowledge of the infant science of bacteriology, to come into the laboratory. Their association for 43 years influenced public health administration in New York City and throughout the world (*3*).

Park worked out a practical method to aid physicians in the diagnosis of diphtheria that led to the establishment of diagnosis by culture. In 1894, for the first time in this country, he immunized horses for the production of antitoxin and produced a serum of a higher grade than any other in the world. On January 1, 1895, the first antitoxin produced in Willard Parker Hospital, with the financial aid of the "New York Herald," was placed at the disposal of hospitals and the needy.

The work of Park and Dr. Alfred L. Beebe on the role of the healthy carrier in the spread of diphtheria is particularly noteworthy since it constituted the first large-scale attack on the disease based on a statistically significant number of cases (*4*).

The establishment of departmental bacteriological laboratories marked an important development in worldwide sanitary work. By using bacteriological methods in the diagnosis and surveillance of infectious diseases, the laboratories furthered scientific procedures in sanitation. The board's application of laboratory methods to sanitation was followed by sanitary authorities in almost every important city in the United States and abroad (*5*). Ehrlich, Wasserman, Koch, Gaertner, and a host of other distinguished scientists visited the laboratories.

Department bacteriologists helped regulate the city's milk supply. In 1892 the carcasses of some tubercular cows were seized from a New York State dairy which sent milk into the city.



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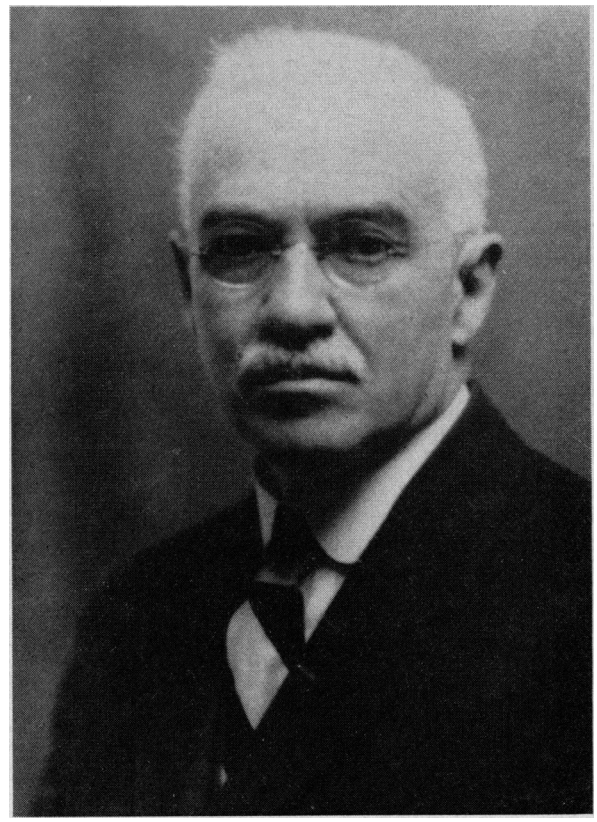
**Dr. Hermann Biggs**

Ernst J. Lederle, acting chemist for the department, obtained samples of the dairy's milk from which Dr. T. Mitchell Prudden and Biggs developed a culture of the tubercle bacillus. The board immediately embargoed milk from the dairy until all diseased animals were destroyed. Lederle, concerned with adulteration of the milk supply by unscrupulous dealers, helped amend the sanitary code in 1896 to require health department permits for dealers selling milk in New York City. To obtain this permit the milk dealer had to name his source of supply and the methods used in production and handling. Chemists and bacteriologists concerned with contamination of water used for drinking and bathing began systematic bacteriological analyses, and the department fought to end the sources of pollution.

With the new knowledge that bacteria, not miasmas, were the causes of disease, certain phases of environmental sanitation lost their importance. In 1892 legislation transferred the approval of plumbing and ventilation plans for projected tenements from the department to the newly created department of buildings. In 1900 the legislature created a tenement house department in the city government, which began supervising multiple dwellings.



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**Dr. William H. Park**

### Comparative Statistics

In 1893 Dr. Roger S. Tracy, deputy registrar of records, realized the value of comparing vital statistics of groups living in different areas of the city and began tabulating statistics for small "sanitary districts." In subdivisions established by the 1890 Federal census, he surveyed groups according to race, age, nationality, social conditions, housing drainage, and vicinity of nuisances. He compared statistics for each district with those for the entire city, including data on diarrheal diseases, diphtheria, phthisis, and pneumonia.

A high death rate prevailed among predominantly Italian districts and a low death rate in districts occupied by Russian and Polish Jews. Italians, unaccustomed to the New York area weather, were subject to phthisis and pneumonia. The Italian population was so large that its excessive mortality produced an appreciable effect on the general death rate. The study demonstrated the need for health administration on a district basis.

In 1898 the Consolidation Act passed by the State legislature extended the city's boundaries to include its five present counties. Incorporating the new area was difficult because of disorganization of the formerly independent local health boards.

### The Early 1900's

Stephen Smith, Elisha Harris, Hermann Biggs, and William Park were the dominant personalities influencing the department's early development. In 1900, members of the distaff side took over: Dr. S. Josephine Baker and Miss Lina L. Rogers, the world's first public health nurse. Infant care and child health were emphasized again.

For many years the summer corps of physicians had given special attention to infants and small children; in 1893 Nathan Straus, through

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**Public health nurse examines school children in the early 1900's**

the department, had started the distribution of pasteurized milk to the city's poor.

Park and Dr. L. Emmett Holt, department bacteriologists, had studied the relationship between infant mortality and bacteria in milk and discovered that cholera infantum or "summer diarrhea" as it was commonly called in those days, was caused by large numbers of ordinarily harmless bacteria which the delicate mucosa of infants could not withstand. They demonstrated that in areas where infants were fed milk from the Straus stations, the mortality rate was considerably reduced. (Other investigators later found that in addition to toxins present in milk products produced by nonpathogens, this disease was also caused by various pathogens including *Salmonella*, *Escherichia coli*, and staphylococci.)

*The nurses and child hygiene.* Medical inspectors in the course of visiting schools sent home children with pediculosis, ringworm, scabies, impetigo, and trachoma. Thousands of children lost time from their studies. Rogers conducted an experiment in communicable disease control with 4,500 pupils from 4 schools in one of the worst city slums. She visited the poor in crowded, unhealthy tenements, teaching parents and children personal cleanliness, hygiene, and simple treatments, which often cured the condition and controlled the spread of infectious diseases. Treatment clinics established in schools enabled pupils to continue their studies while receiving care. Pleased with her success, the board hired 11 more nurses at a salary of $75 a month. Rogers supervised the staff, obtained supplies, and kept records of all examinations and treatments by the nurse in each school. By the end of 1903 the nurses were responsible for a 98 percent reduction in absenteeism for illness.

In 1903, after the schools were closed for the summer vacation, 30 school nurses began visit-

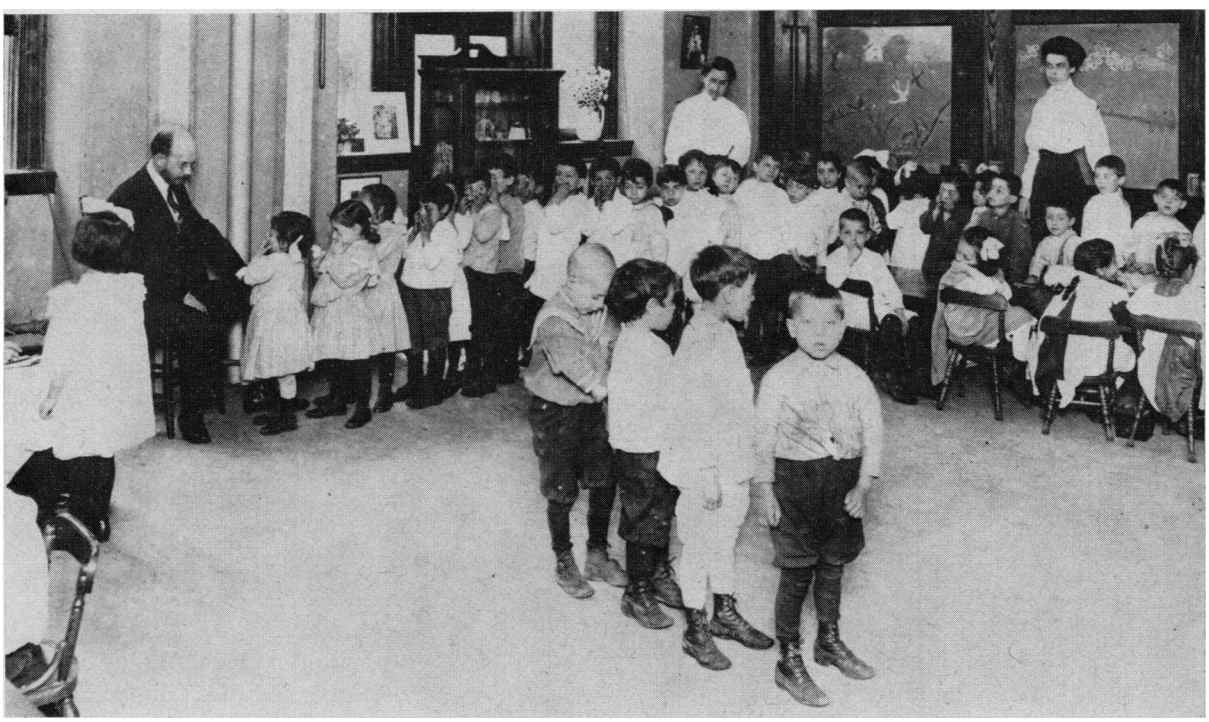
ing babies born in dirty, overcrowded tenements on the Lower East Side. For years in New York City, 1,500 babies had died each week in summer. The nurses demonstrated daily that clean, well-cared for babies meant healthier babies, with greatly enhanced chances for survival. They stressed basic rules for healthful living and encouraged prompt home treatment for ailing infants or hospitalization where necessary. Tickets for free milk and ice were dispensed to the needy. An additional 1,200 babies survived the summer of 1903.

On August 8, 1908, the department established the division of child hygiene, the first such unit in the world. As director, Baker believed that the only way to prevent infants from dying was to prevent them from becoming ill (*6*). She organized a conference on the summer care of babies, which included the staff of the departments of health and education and representatives of hospitals, dispensaries, and settlement houses in an effort to unify these agencies in the area of child care. Free milk stations were converted into "educational centers," and weekly clinics for mothers and babies later became community centers for meetings, sewing classes, and social gatherings.

Baker and her staff enlisted the support of groups like "the little mothers' leagues," which were organized in the public schools by physicians and nurses. The league members were daughters of tenement families, at least 8 years old, who were often left in charge of younger children while their mothers worked. Each child attending a series of lectures received a certificate on child care. The "little mothers" were ardent pupils, who eagerly broadcast their newly learned lessons of health and safety, such as—

- Don't leave the baby on the stove.
- Don't leave the baby run in the mud gutter.
- Don't give the baby beer.
- Don't let the baby eat dirty things from the floor.

By 1911 the department assumed responsibility for the milk stations and set up at least one in every needy district. Gradually these centers aided preschool children and mothers needing prenatal care. To emphasize their comprehensive nursing, medical, and educa-



*New York City Department of Health*

**A physician examines children at school in the early 1900's**



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tional functions, the department renamed the centers baby health stations.

In 1905 a routine examination of each school child for physical defects became part of the school nurses' duties. In 1912 six medical clinics to help physically handicapped children were opened. In 1913 six dental clinics were established. By 1917 the public health nurses and volunteers from private agencies made a concentrated effort to reach as many children with physical defects as possible.

*New laboratory techniques.* Dr. Anna Williams, a department bacteriologist, devised a simple, rapid method of examining brain tissue smears for Negri bodies on the basis of Negri's report on the "organisms" seen in the brain tissues of rabid animals. Park obtained data on the effect of temperature on bacteria in milk and perfected methods for pasteurizing milk. He also planned administrative control of the milk supply through compulsory pasteurization. In 1905 the U.S. Supreme Court upheld the right of the department to limit the sale of milk in New York City to those holding a written permit from the board of health (*7*). In 1906 the board began supervising the sanitation of farms and dairies supplying milk to creameries.

In 1907 an outbreak of typhoid fever in New York City was traced to infection of the Croton water supply. Later that year "Typhoid Mary" was located through the efforts of Maj.

*New York City Department of Health*

**A public health nurse in 1910 teaches a mother how to make baby formula**


*New York City Department of Health*

**Eight-year-olds who cared for younger children learned about health and safety in the little mothers' leagues**

George A. Soper of the U.S. Army and was taken into custody by the health department. Laboratory tests by Park led to the registration and supervision of typhoid carriers (*8*). By 1917 most foodhandlers were examined to detect typhoid carriers.

An epidemic of cerebrospinal meningitis during the winter of 1905–06 initiated extensive laboratory studies by Dr. Josephine Neal, who became a world authority on meningitis.

On May 1, 1912, a laboratory was set up to conduct serologic tests for syphilis and complement fixation tests for gonorrhea, as part of Bigg's anti-venereal disease program. In addition to free laboratory tests, private physicians, hospitals, and clinics were asked to report cases of syphilis and gonorrhea. Clinics were established for diagnosing and treating venereal diseases, and special hospital facilities to forcibly detain irresponsible patients were set up. A pioneer educational campaign against quackery in treating venereal diseases served as a model for future venereal disease programs throughout the country.

*Bureau of health education.* In 1914 a bureau of health education was established, the first of its type to be affiliated with a public health agency. Directed by Dr. Charles F. Bolduan, the bureau conducted training programs for departmental staff and organized health lectures for high school and college students and factory workers. A "baby week" and a "clean-up week" were promoted. Lantern slides and movies were introduced. Leaflets

were printed and distributed to the public on various health topics, and a letter on general sanitation was addressed to city foodhandlers. A representative of the Russian Government visiting the department commented that information he received about the bureau of health education would be used in formulating health methods in Russia.

In 1915 the department's exhibit at the Panama Pacific Exhibition won a grand prize, the only award of its kind given to a city agency. Also in 1915 the "Health Chronicles," leaflets adapted to needs of special areas in the city, were developed. In 1916 a nationally publicized film of the Universal Film Company depicted the work of the bureaus of food and drugs and laboratories.

In 1914 Dr. Haven Emerson was appointed deputy commissioner and sanitary superintendent for the city, and the sanitary code was rewritten for the first time. In 1915 Emerson helped to create from the bureau of infectious diseases the bureau of preventable diseases, which included a division of industrial hygiene, with a research staff and an occupational clinic where physicians examined foodhandlers.

By 1916 the department, celebrating its 50th anniversary, had achieved a number of "firsts" in the fields of nursing, laboratories, maternal and child health, health education, and vital statistics. During the next two decades the department established district health centers, an expanded maternal and child health service, and an extensive program to combat tuberculosis.

### District Health Centers

Following World War I, several studies demonstrated the validity of district health plans. The 1921 East Harlem study, sponsored by the American Red Cross, compared a generalized nursing service with a specialized nurs-

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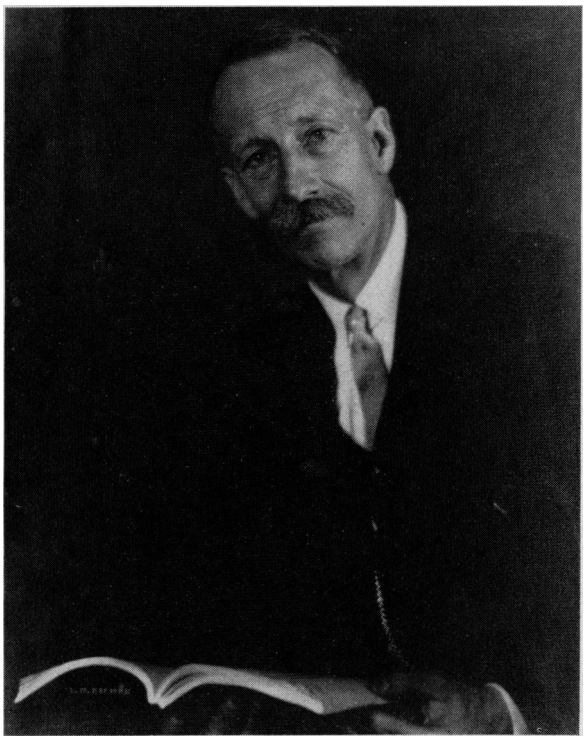
**A public health nurse teaches a group of mothers at a child health station in 1910**



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**Dr. Haven Emerson**

ing service. It was determined that specialized service tends to isolate and concentrate on specific health conditions while generalization embraces the larger idea of the social, emotional, and economic factors in a family. As a result the bureau of nursing was set up.

The Bellevue-Yorkville demonstration was one of three projects in New York State undertaken by the Milbank Memorial Fund to determine if the extent of sickness in the United States could be diminished and mortality reduced by intensive application of known health measures, and if practical results could be achieved within a short period at a cost that communities could afford.

The Bellevue-Yorkville District was selected because it was thought to have a population representative of a United States metropolitan area. The study was started in 1924 with a community health council of 106 members, a board of managers of 25 members, and an executive board of 8 members. The program, formally initiated in 1926, emphasized tuberculosis control but encompassed every phase of public health activities including mental hygiene and control of cardiac disease. The child health program included dental hygiene, nutrition, recreation, and routine clinic and school health services; nursing followup was emphasized. Generalized nursing services, morbidity and mortality rates, and the demographic characteristics of the district were studied.

As a result, in 1929 Dr. Shirley W. Wynne, commissioner of health, appointed a committee on neighborhood health development to consider the district health center setup. The committee recommended dividing the city into 30 health districts, each with its own health center and an average population of 250,000. The recommendations were accepted, and a demonstration district health center was established in Harlem in 1930. In 1934 the department opened seven district centers and appointed Dr. Margaret W. Barnard as director of district health administration. By 1937 each of the city's five medical colleges was affiliated with a district health center to cooperate in public health teaching and research. By 1940 the city had erected 1 laboratory building, 15 new health center facilities, and 9 child health stations.

### Maternal and Child Health Services

In the 1920's the department attempted to control congenital diseases through intensive supervision of expectant mothers. To safeguard the health of pregnant women, department nurses tried to register them with baby health stations as early in pregnancy as possible. The nurses periodically visited them before and after birth, giving advice and instruction in diet and hygiene. New York City was the only American city with a municipal school for midwives and a regulation that only its graduates could practice midwifery. In 1921 a study by William Travis Howard, Jr., of the Johns Hopkins University, that compared maternal mortality of various United States and European cities indicated that New York City had an enviably low rate.

Twelve prenatal clinics, financed by the national Sheppard-Towner Act, were established in 1924. Two years later the department partially supported these clinics, urging midwives to visit them to observe techniques of prenatal

care. Eventually, 17 prenatal clinics evolved with the aid of Federal and private philanthropic agencies.

The high infant mortality among premature babies prompted the commissioners of health and hospitals to appoint a special committee on prematurity to set standards for the care of premature infants in hospitals. By 1939 maternal and infant mortality was reduced appreciably. In 1941 the department arranged for the Visiting Nurse Association to follow up with home visits the infants born on hospital ward service, to supplement its own service.

In 1918 the baby health stations began supervising preschoolers, and in the late 1920's they adopted the "squad system" (a team of three medical specialists) in examining these children. Although Baker and her associates seriously questioned the wisdom of such methods, they agreed that many defects were discovered, and the system continued until 1938, when the care of infants and preschoolers was merged. The department then began using child health stations as teaching centers for medical students.

In 1929 the school health service moved into the vocational high schools, and in 1934 a division of school hygiene was created. To further coordination between school health services and the department of education, the Astoria health demonstration was created to concentrate medical services on children most in need of care rather than on routine annual examination of all children. Children requiring medical attention were referred to a nurse, to follow up with parents and ultimate treatment in a clinic or by a private physician. Today the Astoria plan is the basic plan of the city's school health program.

One of the most neglected aspects in child medical care was dental health. Baker obtained the first budgetary provision for dentistry in 1913 when she declared: "It is safe to assume that not less than 90 percent of school children in this city require dental treatment." Although dental hygienists were added to the staff in 1917, almost all clinic time was occupied with treating acute conditions. Baker decided to shift major emphasis to diagnostic and prophylactic work among children in the first and second grades. In 1921 the board of education agreed to place dental clinics in the public schools under the control of the health department. By 1933 a newly organized division of dental services was operating about 100 clinics, which several years later were offering complete operative, prophylactic, and dental health education services.

### Diphtheria and Tuberculosis Control

In 1928 Commissioner Wynne organized the Diphtheria Prevention Commission. Its members included Cardinal Hayes, Bishop Manning, Rabbi Stephen Wise, Nicholas Murray Butler, Herbert Lehman, Albert G. Milbank, Ralph Pulitzer, Mrs. Ogden Reid, and Paul Warburg. Aided by the Milbank Memorial Fund and the Metropolitan Life Insurance Company, a special staff worked with the bureau of health education. The Diphtheria Prevention Commission, operating from 1928 to 1931, aimed to inform the general public about the prevention of diphtheria and to demonstrate that lives could be saved if funds became available for a permanent program in the department. More than 8.5 million pamphlets in 10 languages were distributed, and more than 1,000 billboard posters were displayed. A pastoral letter from Cardinal Hayes urging parents to immunize their children was read in every Catholic church. Using six snow-removal trucks that were idle during the summer, physicians and nurses toured the city and immunized thousands of children.

From 1921 through 1925 there was an annual average of 739 deaths from diphtheria and 45 deaths per 100,000 children under 15. From 1931 through 1935 the annual average was 131 deaths and 7.7 deaths per 100,000 among children under 15.

In 1926 aid from the Milbank Memorial Fund helped to open a demonstration tuberculosis clinic as a training center for physicians. In 1927 the department opened three units to provide chest consultation services for private physicians. Some clinics provided pneumothorax treatment through "refill" units to supplement services available in hospital outpatient departments. The depression in 1934, mass unemployment, and fear of a resurgence of tuberculosis led to promoting the division of tuberculosis to bureau status and the establishment

of a central registry. A new program placed prime importance on routine mass chest X-ray surveys.

### Food and Drug Control

During the 1920's and 1930's the department's bureau of food and drugs regulated the methods of food processing and sales through its divisions for milk, fish and shellfish, general food inspection, and drugs and patent medicines, emphasizing the prevention of adulteration, deterioration, and misbranding. In 1922 the department required that all cases of food poisoning be reported, and each was carefully investigated. Frozen desserts and shellfish were regulated by the board, and in 1932 the sale of "loose," or bulk, milk was prohibited. Because regular personal inspection of wholesale and retail food businesses by the department staff was impossible, a program of "self-inspection" by which the food industry began policing itself was relied upon.

For many years the department was authorized to seize and condemn adulterated and misbranded drugs, medicines, poisons, and cosmetics. A patent medicine committee was set up in 1922 to deal with such illegal practices in labeling, advertising, and selling patent medicine. Later a list of harmful drugs to be sold only on prescription was established, and drug firms were required to prove the effectiveness of new drugs before marketing them in the city.

In many fields such as poultry and meat inspection, taking of shellfish, and food and drug adulteration standards, the department reluctantly had to repeal its regulations to conform with the more lenient requirements of the U.S. Food and Drug Administration.

### Vital Statistics

In January 1935 Thomas J. Duffield, a prominent statistician, was appointed registrar of records. His introduction of modern business machines and new coding, punching, and reproducing operations increased the amount of statistical data available to the various bureaus. The registrar of records worked closely with those promoting legislation (passed in 1936) that prohibited mention of illegitimacy on birth certificates but allowed substitution of new birth certificates when parents married after the birth of a child, when a child was adopted, or when the court entered a decree of paternity. The law also required the courts to notify the commissioner of health when an order of adoption was established and the department of welfare to submit "foundling" certificates for babies of unknown parentage.

In November 1936 the health department agreed to send copies of death certificates for women who died in Brooklyn of puerperal causes to the chairman of the committee on maternal welfare of the Kings County Medical Society. The physician signing the death certificate could then discuss at the committee's next meeting all aspects of the case and the committee would be in a position to recommend treatment in future instances. Duffield was the first layman appointed to a county medical society committee in New York City.

Another of Duffield's contributions was adding a supplemental section on confidential medical information to certificates of birth, death, and fetal death. For deaths, this procedure eliminated barriers sometimes preventing a practicing physician from recording the true cause of death, to avoid offending the family of the deceased, and maintained the confidential patient-physician relationship. The reports were not subject to subpoena and were to be used only for scientific purposes approved by the board of health (*9*).

The confidential death certificate was used experimentally in the Borough of Manhattan beginning in 1939. Deaths ascribed to syphilis in Manhattan in 1939 were 35 percent higher than in 1938; in Brooklyn, where the old certificate was used, deaths attributed to syphilis were 10 percent lower than in 1938. Opposition to the new death certificates by insurance companies resulted in numerous court cases, which were decided in the department's favor. The system was extended to the entire city in 1947.

The confidential reports on birth and fetal death certificates, adopted at the request of the county medical societies, included data such as gestational age, weight at birth, and mode of delivery.

Since useful analysis of infant mortality re-

quires facts on the mother's pregnancy and delivery, as well as about the infant's death, the statistical division in 1938 began to prepare a composite punchcard for every neonatal death, combining data from the death certificate and the corresponding birth record. The cards provided communitywide data in tabulations of neonatal deaths by gestational age, weight at birth, mode of delivery, and traditional variables such as age of mother and parity. New York City, the first city to use this type of card, later prepared them for all infant deaths.

In 1939 the term "fetal death" was defined in the sanitary code as including all terminated pregnancies other than live births, supplanting the term "stillbirth." All pregnancies regardless of the gestation period were required to be reported. The use of the term "fetal death" was subsequently adopted by the World Health Organization and recommended for adoption throughout the world.

On December 10, 1940, the board of health adopted stringent new rules governing the alteration of records and delayed registration of birth. A delayed registration became acceptable only when documentary evidence was submitted substantiating beyond reasonable doubt that the person was born in New York City on the alleged date.

### World War II

World War II depleted the staff of the health department and postponed the emergence of research as its dominant new force. It also resulted in new services. Numerous cases of venereal disease discovered by routine selective service examination brought about a campaign aimed at the Armed Forces but soon expanded to include civilians and particularly persons between the ages of 15 to 24. Dr. John F. Mahoney's discovery in 1943 that penicillin could cure venereal disease reduced the treatment period from 2 years to 2 weeks. The department launched an intensive long-range program of casefinding and followup of contacts.

A tropical disease diagnostic clinic was opened primarily to diagnose tropical diseases acquired by servicemen, but the tremendous increase in world travel after the war and the migration of Puerto Ricans to New York City contributed to the clinic's growth. Private physicians often used the department's facilities for parasitological diagnosis.

Because of an acute shortage of oil and coal in 1945, the board gave the commissioner of health temporary authority to take any measure necessary to obtain equitable distribution of available fuel. During a tugboat strike in 1946, the board attempted to conserve fuel and to distribute it only in the public interest.

Black marketeers bringing uninspected meat into the city for sale at exorbitant prices, without ration stamps, soon had to deal with an amendment in the sanitary code that permitted the commissioner to inspect the city's meat supply for the duration of Federal rationing.

A meager staff of 166 inspectors, inability to purchase equipment needed for the sanitary conduct of a food establishment, and inexperienced help gave many restauranteurs an excuse for indifference to sanitation. Despite intensified educational efforts many of them, while giving lip service to the program, did little to improve their establishments. Therefore, a summons was issued and a fine imposed when an obstinate owner failed to remedy violations. The board amended the sanitary code to give the commissioner power to close, on 48-hour notice, any restaurant endangering the public's health.

World War II gave the department its first experience in administering a medical care program when Congress passed the Emergency Maternity and Infant Care Act to protect the health of infants and pregnant wives of servicemen. By the end of 1947 the department had expended more than $6.8 million for the maternity care of nearly 53,000 mothers and infants and for health supervision of approximately 12,000 babies under the age of 1 year, yet the neonatal death rate had failed to decline. The board then revised sections of the sanitary code regulating conditions in hospital maternity and nursery departments, and some services were closed.

Because the manpower shortage resulted in high salaries for inexperienced workers, many young mothers went to work, leaving their children in nurseries. A day care unit was organized in 1943 for inspection and supervi-

sion of nearly 500 agencies caring for children during the day. Unsatisfactory and dangerous conditions were rectified by owners fearing the loss of licenses.

About this time a board resolution permitted approved child-placing agencies to certify foster homes to which they assigned children. This action was necessary because of the increasing number of such homes and the inability of the department's staff to continue providing direct supervision. The department reserved the right to inspect the homes periodically.

The department began education in nutrition in 1932, with a demonstration consultant program under the American Red Cross. By 1937 a position for a nutrition consultant was budgeted, and in 1943 a grant from the Children's Bureau allowed the establishment of a division of nutrition. Also in 1943 Mayor Fiorello H. LaGuardia requested two daily radio programs on nutrition. Department nutritionists, aided by two nutrition consultants from the New York Tuberculosis and Health Association, talked with mothers in child health stations and with homemakers and children on street corners, rode wartime mobile kitchens, and served as consultants for industrial health projects and medical boards reviewing requests for extra ration books. They worked with teachers and pupils on projects for education in nutrition and, as members of the New York Budget Council, helped develop low-cost budget standards. "A Family Budget Standard" was prepared in 1944 by bureau nutritionists who helped train medical students, graduate nutrition students, and dietetic interns.

On March 7, 1947, the department was faced with a smallpox epidemic. An American businessman from Mexico registered in a New York hotel, became ill, and entered a hospital, where smallpox was diagnosed. Soon 11 other cases were reported. The man and 1 of the 11 persons died. The laboratories worked around the clock to produce a package vaccine. Additional supplies were obtained from the Army, the Navy, and pharmaceutical houses throughout the country. At stations set up in police precincts, health department buildings, clinics and hospitals, labor organizations, business concerns, and volunteer citizens' associations, 5 million persons were vaccinated in 2 weeks. The disease was contained to the 11 initially reported cases.

### The Last 20 Years

As communicable diseases were brought under control, chronic diseases (coronary heart disease, hypertension, cancer, diabetes, cerebrovascular disease, arthritis, and mental illness) necessitated new fields of research and study to develop effective programs.

In 1948 the newly formed bureau of adult hygiene launched one of the first large-scale efforts by a municipal health agency to control chronic and degenerative diseases. Services for the detection of chronic diseases needed to be made readily available to the residents of New York City, particularly to the medically indigent. The health maintenance center for adults opened in cooperation with St. Luke's Hospital helped to meet this need. In addition, the department set up four centers for the detection of diabetes and glaucoma.

The cancer prevention and detection service, established in 1947, aimed to develop and to evaluate methods of cancer detection useful in screening large groups of patients. Cytological and clinical laboratory services of the bureau of laboratories were offered to the cancer and diabetes detection centers and to the cardiac and nutritional disease programs.

The Rh laboratory was established as a reference center to develop and to standardize new techniques and as a consultation center to resolve problems in blood groupings and antibody identifications. In 1955 a public health virus laboratory was opened, and by 1957 facilities were completed for the isolation and serologic identification of many viruses including poliomyelitis, coxsackie, influenza, and the adenoviruses. With the establishment of the adenovirus center in 1961—a cooperative project between the bureau of laboratories and the Public Health Research Institute—work was started on plans to develop a National Reference Center for certain viral and microbiological agents. In 1962 a mycology laboratory was set up.

After the effectiveness of isoniazid was proved in 1952, chemotherapy became the most important service offered in department clinics

to tubercular patients, and a vigorous casefinding campaign was undertaken. Of the many persons attending department clinics who were affected by the complications of chronic pulmonary disease, an increasing proportion were elderly persons with nontuberculous pulmonary diseases. In 1956 the department affiliated its chest clinics with selected municipal hospitals offering facilities to treat pulmonary diseases. By 1962 this approach was insufficient, and the department established chronic respiratory disease centers where diagnosis and referral to proper agencies for medical care were made. In 1963 the department began offering BCG vaccination to school children in areas with a high prevalence of tuberculosis.

*Innovations in infant and child care.* To provide better care for children, the department began affiliating child health stations with hospitals offering pediatric services. Physicians in these clinics were compensated by the department and also served on the pediatrics staffs of the hospitals. In stations not associated with a hospital service, mild illnesses were treated; serious cases were referred to hospitals, and forms were sent along requesting reports of diagnosis and treatment. By the end of 1950 the 75 child health stations in operation throughout the city could not meet the demand for services. Today 83 stations are maintained and more are needed.

During the late 1950's staff psychiatrists and psychologists observed procedures in child health stations for their mental health implications. New emphasis was placed on the attitude study, begun in 1949, to aid physicians and nurses in the child health services in formulating better ways of helping parents meet emotional problems which occur in child rearing. The study drew worldwide attention. The World Health Organization's European regional officer for mental health asked the department to systematically train physicians who were to be put in charge of well-baby work in certain Western European countries. In 1958 child health stations began testing for phenylketonuria (PKU), 6 years before the State law was passed requiring PKU testing of all newborns.

The premature transport services, operating today on a 24-hour basis, were designed in 1948 to move infants of low birth weight from hospitals unable to give them proper care to those that could provide the correct care. In July 1950 a program to pay hospitals caring for infants in special centers was started under requirements set with the help of the pediatrics advisory committee.

The section of the sanitary code regulating hospital maternity and newborn services was revised in 1953 to emphasize the availability of adequate prenatal care, skilled medical and nursing personnel, facilities, equipment, and supplies for conditions such as hemorrhage, toxemia, deaths from anesthesia, prematurity, and birth injury. Through the hospital consultation program, the department provides aid and guidance to hospitals offering maternity services.

Concern with the fragmentation of medical care offered by various city agencies brought about the establishment in 1952 of the Interdepartmental Health Council of New York City. The council was formed to provide maximum coordination in the administration and development of health services.

In the early fifties the department, on advice of a group of experts, closed its prenatal clinics and transferred the patients to the prenatal clinics of various hospitals. It soon was obvious, however, that the hospitals suffering from a shortage of medical and nursing staff could not cope with the growing need for prenatal care services. In 1961 the health department initiated a pilot program of total maternity care in deprived areas with high infant mortality rates.

Two prenatal and post partum "satellite" clinics were opened in selected health centers and associated with the obstetric services of nearby hospitals. Similar programs were set up in 1964 by State and other local authorities with Federal funds from the Children's Bureau. Today five additional satellite clinics are being operated in New York City and serve as models for a national program.

Since 1955 the financial assistance program has provided care for children with orthopedic handicaps, cerebral palsy, heart disease, rheumatic fever, eye problems, cleft lip and palate, hearing impairment, epilepsy, and congenital anomalies. In 1963 the definition of the handi-

capped child was broadened to include many chronic childhood diseases.

The bureau of dentistry administers a program to provide rehabilitation for children suffering from seriously handicapping conditions of the teeth, face, and jaws. The department operates 181 dental clinics that care for medically indigent children. In recent years it has extended its services to adults, providing dental care for the chronically ill, the aged, the bed-bound, and the nursing home resident.

For years the department advocated fluoridation of the city's water supply to prevent dental caries. On December 12, 1963, the Board of Estimate approved fluoridation.

*Environmental health.* In 1943 the bureau of sanitary engineering was created to work with the department of water supply, gas, and electricity in establishing and applying public health engineering standards to the city's water supply. New York City uses daily more than a billion gallons of water, transported by a complex system of reservoirs, transmission lines, and distribution piping. The 1½ billion gallons of waste water are collected daily in a vast network of sewers, and only 60 percent of it is treated by pollution control plants. Heavy rainfall can cause the combined sewers to overflow, with harbor waters endangering the beaches and polluting the bays and estuaries.

In a 2-year study of emergency water supplies for New York City, the bureau of sanitary engineering checked approximately 1,000 wells for pump capacity, electrical characteristics, presence of standby power, and for bacteriological quality and chloride content. The study report, issued in 1964, suggests ways to utilize ground water sources within the city to provide an emergency water supply. The report is particularly timely since the city's watershed has suffered a 4-year drought, leaving the upstate reservoirs at 35 percent of capacity.

The department established the office of radiation control in 1958, under the direction of a specialist from the Atomic Energy Commission, and began to register and inspect all X-ray equipment used in the city. In 1962 the Atomic Energy Commission turned over the functions of licensing and inspecting nonindustrial uses of radioisotopes in the city to the department. A new section of the health code, effective February 1, 1964, requires the annual calibration of X-ray therapy machines used on humans and extra calibration after certain specified major equipment changes. Environmental radioactivity is now sampled continuously. Through air-monitoring equipment on the roof of the department building in Manhattan, samples of air dust are collected and then analyzed; the findings are reported daily to the Public Health Service.

During the 1950's housing once again became a major concern of the department when it became necessary to design and enforce programs to correct rapidly deteriorating housing throughout the city. Approximately 150,000 inspections were made yearly in response to citizens' complaints of unsanitary and hazardous housing conditions. In this period campaigns were also undertaken to eliminate deaths from carbon monoxide poisoning and to investigate cases of lead poisoning in children.

In March 1955 a poison control center was created to make available on a 24-hour basis to any physician or hospital information on the ingredients of and proper treatment for potentially dangerous preparations. Reporting poisoning cases to the department is mandatory for every hospital and private physician. Such cooperation has enabled the center to compile detailed data on various types of poisons as a basis for preventive measures in the department, industry, and hospitals.

The center serves upstate New York, the entire metropolitan area of the city, and parts of New Jersey and Connecticut. Similar agencies throughout U.S. communities and in France, England, Australia, New Zealand, and Sweden have been guided by the center's experience.

*Regulation of drugs.* The increasing misuse of barbiturates continues to be serious in New York City. Each barbiturate poisoning is investigated by the department, and efforts are made to educate the public about the dangers of taking drugs indiscriminately. The police department narcotics squad found that the shortage of narcotics during the World War II led addicts to resort to barbiturates. Aided by unscrupulous drug firms, the addicts built up a large traffic in barbiturates that are sold without a prescription.

In 1954 the discovery was made public that chlorpromazine (thorazine) and reserpine produced dramatic results in mentally disturbed patients and considerably reduced admissions to mental hospitals. The tranquilizers, which sedate without hypnotic effect but can cause harmful side effects, were placed on the sanitary code list of drugs that cannot be sold without a prescription.

In 1956 the committee on public health of the New York Academy of Medicine and the bureau of food and drugs, concerned with extravagant claims in promotion literature distributed by drug manufacturers to the medical profession, requested representatives of the drug industry to "clean up" and police their own industry. The revised 1959 health code prohibits false, misleading advertising on television, radio, and magazines by producers and distributors of drugs.

After the possible side effects of thalidomide were known, the city's health code was amended in August 1962 to require every U.S. company selling drugs in the city to register with the department. All companies shipping nonapproved drugs to the city for clinical testing are required to notify the department in writing; the information is kept confidential. If a company refuses to permit examination of shipment records, the department can revoke the company's registration.

### The Changing Public Health Spectrum

Most of the department's direct health services are funneled through decentralized programs in 22 district (8 are combinations of two neighboring districts) health centers. The local health officer maintains a "miniature" health department adapted to local needs.

Recent mass migration of underprivileged and deprived population groups into New York City from Puerto Rico and other areas of the country has produced major pockets of severe medical and health needs. Since city hospitals are unable to meet the demand for ambulatory care services, the department is strengthening its own programs, especially for the medically indigent, through the satellite clinics and health center programs.

To meet the acute nursing shortage, which continues to handicap services, the department employed its first practical nurse in January 1963 and stepped up efforts to recruit public health nurses part time. Health aides and assistants also are being employed to expand the nursing staff for new facilities and programs.

The New York City Health Department's experience in controlling communicable diseases has aided the development of effective communitywide programs to protect public health. The office of program planning, research, and evaluation was established in 1955 to devise new or revise service programs and to meet increasing demands in the area of chronic disease. The bureau of records and statistics, one of two original bureaus set up by the Metropolitan Board of Health in 1866, was placed under the deputy commissioner of the office of research.

In September 1958 Mayor Wagner announced formation of the Health Research Council to stimulate and support through grants research on health problems affecting New York City, to encourage careers in research, and to promote scientific education and training. The council is unique in that under its direction local tax funds may be used to support health research activities in public and private agencies when needed.

Late in 1958 Dr. Leona Baumgartner, then the commissioner of health, announced the completion of a 3-year task of revising and rewriting the sanitary code, which was renamed the New York City Health Code. It includes legislation aimed at controlling radiological health hazards—believed to be the first comprehensive radiation legislation adopted by a city. The Rockefeller Brothers Fund and the W. K. Kellogg Foundation each contributed $30,000 to pay for drafting the new code. Since the New York City Sanitary Code has often served as a model for basic public health laws elsewhere, both organizations made their contributions as a public service. Advice in drafting the new code came from persons in government, industry, medicine, the sciences, and universities.

The accomplishments of the New York City

Department of Health during the past 100 years represent the work of many outstanding men and women who have considered public health not only a career but a vocation.


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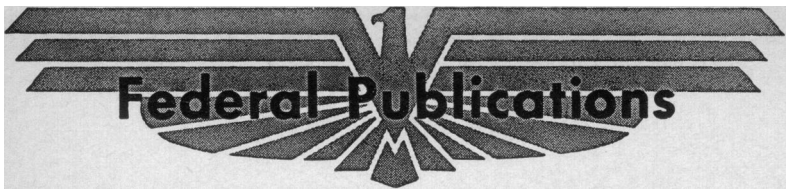
## The City Inspectors

Before the New York City Metropolitan Board of Health was established, the city inspector's department, in existence since 1805, was responsible for health matters. The city inspector was elected. He appointed his subordinates, the health wardens, subject to the consent of the board of aldermen.

Dr. Charles F. Bolduan, writing for the health department's semicentennial in 1916, noted, "There is danger that we overlook the substantial work of those who preceded the Metropolitan Board of Health. As one studies the City Inspectors' Reports from 1805 to 1865, it is clear that some excellent men were at the helm in those days."

City inspector Dunnell in 1838 called for more accurate mortality returns and the maintenance of a registry of births. In 1842 Dr. John H. Griscom urged preventive and remedial measures for health protection. He spoke of overcrowded dwellings, habitation of dark damp cellars, need for clean streets, abolition of pigsties, removal of slaughter houses, drainage of marshlands, and establishment of public baths. Other inspectors urged establishment of municipal slaughter houses, a hospital for pestilential and epidemic disease, home sanitation surveys, improved playgrounds, limitations on number of persons living in tenements, and prohibition of cellar or basement occupancy.—*Excerpted from "Over a Century of Public Health in New York City," by Charles F. Bolduan, Department of Health Monograph Series, No. 13, New York City, March 1916.*




**Water Supply Management in the Packaged Disaster Hospital.** *PHS Publication No. 1071–F–6; 1965; 35 pages.* Designed as a training manual and familiarization tool for sanitarians, water managers, and personnel responsible for the water supply equipment. Covers the use of all the water supply equipment in the Packaged Disaster Hospital. Contains detailed information on the equipment and accessories and provides assembly instructions illustrated with schematic diagrams and photographs. Discusses disaster water requirements, predisaster preparations, disinfections techniques, and measurement of chlorine residuals. Should be of special interest to community leaders in preparing emergency water supply plans.

**Health Statistics From the U.S. National Health Survey.** National Center for Health Statistics.

PLAN AND INITIAL PROGRAM OF THE HEALTH EXAMINATION SURVEY. *PHS Publication No. 1000, Series 1, No. 4; July 1965; 43 pages; 35 cents.*

REPORTING OF HOSPITALIZATION IN THE HEALTH INTERVIEW SURVEY. *PHS Publication No. 1000, Series 2, No. 6; July 1965; 71 pages; 45 cents.*

HEALTH INTERVIEW RESPONSES COMPARED WITH MEDICAL RECORDS. *PHS Publication No. 1000, Series 2, No. 7; July 1965; 74 pages; 50 cents.*

COMPARISON OF HOSPITALIZATION REPORTING IN THREE SURVEY PROCEDURES. *PHS Publication No. 1000, Series 2, No. 8; July 1965; 48 pages; 40 cents.*

COOPERATION IN HEALTH EXAMINATION SURVEYS. *PHS Publication No. 1000, Series 2, No. 9; July 1965; 38 pages; 35 cents.*

HOSPITAL UTILIZATION IN THE LAST YEAR OF LIFE. *PHS Publication No. 1000, Series 2, No. 10; 30 pages; 30 cents.*

DESIGN OF SAMPLE SURVEYS TO ESTIMATE THE PREVALENCE OF RARE DISEASES: Three unbiased estimates. *PHS Publication No. 1000, Series 2, No. 11; October 1965; 8 pages; 15 cents.*

METHODOLOGICAL ASPECTS OF A HEARING ABILITY INTERVIEW SURVEY. *PHS Publication No. 1000, Series 2, No. 12; October 1965; 19 pages; 25 cents.*

INFANT AND PERINATAL MORTALITY IN THE UNITED STATES. *PHS Publication No. 1000, Series 3, No. 4; October 1965; 87 pages; 55 cents.*

FERTILITY MEASUREMENT. A report of the United States National Committee on Vital and Health Statistics. *PHS Publication No. 1000, Series 4, No. 1; September 1965; 26 pages; 25 cents.*

NATIONAL VITAL STATISTICS NEEDS. A report to the United States National Committee on Vital and Health Statistics. *PHS Publication No. 1000, Series 4, No. 2; September 1965; pages 221–271; 35 cents.*

VOLUME OF PHYSICIAN VISITS. By place of visit and type of service, United States, July 1963–June 1964. *PHS Publication No. 1000, Series 10, No. 18; June 1965; 43 pages; 35 cents.*

PHYSICIAN VISITS. Interval of visits and children's routine checkup, United States, July 1963–June 1964. *PHS Publication No. 1000, Series 10, No. 19; June 1965; 58 pages; 40 cents.*

PERSONS HOSPITALIZED. By number of hospital episodes and days in a year, United States, July 1960–June 1962. *PHS Publication No. 1000, Series 10, No. 20; June 1965; 42 pages; 35 cents.*

SELECTED HEALTH CHARACTERISTICS BY OCCUPATION, UNITED STATES, JULY 1961–JUNE 1963. *PHS Publication No. 1000, Series 10, No. 21; August 1965; 70 pages; 50 cents.*

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WEIGHT AT BIRTH AND CAUSE OF DEATH IN THE NEONATAL PERIOD, UNITED STATES, EARLY 1950. *PHS Publication No. 1000, Series 21, No. 6; July 1965; pp. 225–299; 50 cents.*

HOSPITALIZATION IN THE LAST YEAR OF LIFE, UNITED STATES, 1961. *PHS Publication No. 1000, Series 22, No. 1; 46 pages; 35 cents.*

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**This section carries announcements of new publications prepared by the Public Health Service and of selected publications prepared with Federal support.**

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PHR SYNOPSES

**SPEARE, ELIZABETH (New York City Department of Health): *Interdepartmental Health Council of New York City. Public Health Reports, Vol. 81, January 1966, pp. 25–30.***

The Interdepartmental Health Council of the City of New York is the mechanism that the commissioners of health, hospitals, mental health services, and welfare use to coordinate the city's health and medical services. Through regular meetings of the commissioners, interdepartmental staff committees, professional advisory committees, and interlocking directorates between departments, the council upgrades the quality of medical and health care, sets standards, and resolves administrative problems. Brief descriptions of the city's cooperative ventures in welfare medical care and of an amputee service program, a health maintenance service for the elderly, a multipurpose hospital-health facility and program, and legislative activity illustrate the council's methods of operation.

**BLATZ, HANSON (New York City Department of Health), HELLER, M. B., KAMHOLZ, S. M., LYNCH, D. E., PAUL, I. R., REICH, B. S., and SMOLENS, M.: *The radiation control program. Public Health Reports, Vol. 81, January 1966, pp. 57–63.***

The legal authority for the radiation control program of the New York City Department of Health is the health code. Since 1958 it has required registration of radiation installations and compliance with requirements of the National Committee on Radiation Protection and Measurements. Since 1962 the code and an agreement between New York State and the Atomic Energy Commission have provided for the regulation of radioisotopes.

The program is administered by the office of radiation control of the New York City Department of Health, which inspects the equipment and safety practices of nonindustrial users of radioisotopes and about 17,000 X-ray machines in the city, processes licenses for the use of radioisotopes, responds to calls for help in radiation accidents, develops instruments and techniques, air-monitors the environment, and with a Public Health Service grant provides instruction courses for radiation-control employees in addition to those restricted to New York City.

The Mayor's Technical Advisory Committee on Radiation provides expert advice. A subcommittee reviews license applications for human uses of radioisotopes. The mayor's committee, the office of radiation control, and the Interagency Council on Radiation were organized in 1958 and 1959. The council consists of the heads of appropriate city agencies who coordinate such matters as monitoring the radiological levels of water and transporting radioactive materials.

**CHRISTAKIS, GEORGE (New York City Department of Health), RINZLER, SEYMOUR H., ARCHER, MORTON, and MASLANSKY, ETHEL: *A summary of the research activities of the anti-coronary club. Public Health Reports, Vol. 81, January 1966, pp. 64–70.***

The anti-coronary club study project not only provides a reasonable basis for public health action in dietary prevention of coronary heart disease but also has provided a fertile field for gathering clinical, metabolic, and psychosocial research data.

Substudies to the original project indicate that the "prudent diet," the anti-coronary club study diet, is effective in lowering the level of serum cholesterol for periods up to 6 years and that this reduction is associated with a reduced incidence of coronary heart disease when compared to the incidence in a control group consuming the usual American diet. Preliminary data suggest that the study diet may also lower serum triglycerides.

Subjects consuming the prudent diet exhibited significantly increased levels of linoleic acid in their depot fat. Depot fat aspiration proved useful for objective assessment of adherence to the experimental diet. Long-term adherence to the diet also resulted in normal levels of serum vitamin E and A.

A psychosocial study of anti-coronary club active members and dropouts suggested categorization of the subjects into different types of personality groups, a division which may have predictive value of public health importance.

The results presented in this brief summary report are preliminary and only describe substudies in progress.